AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1. (Canceled)

2. (Currently Amended) The method of Claim 40, wherein the first set of rules causes the ~~radio access network~~ transmitting peer entity to send the polling request when a last Protocol Data Unit (PDU) in a transmission buffer is transmitted.

3. (Currently Amended) The method of Claim 40, wherein the first set of rules causes the ~~radio access network~~ transmitting peer entity to send the polling request when the status report has not been received by the ~~radio access network~~ transmitting peer entity and a polling timer has timed out.

4. (Currently Amended) The method of Claim 40, wherein the first set of rules causes the ~~radio access network~~ transmitting peer entity to send the polling request when the ~~radio access network~~ transmitting peer entity has transmitted a predefined number of Protocol Data Units (PDUs).

5. (Currently Amended) The method of Claim 40, wherein the first set of rules causes the ~~radio access network~~ transmitting peer entity to send the polling request when the ~~radio access network~~ transmitting peer entity has transmitted a predefined number of Service Data Units (SDUs).

6. (Currently Amended) The method of Claim 40, wherein the first set of rules causes the ~~radio access network~~ transmitting peer entity to send the polling request when the ~~radio access network~~ transmitting peer entity has transmitted during a predefined portion of a transmitting window.

7. (Currently Amended) The method of Claim 40, wherein the first set of rules causes the ~~radio access network~~ transmitting peer entity to send the polling request when the ~~radio access network~~ transmitting peer entity has transmitted during a predefined period of time.

8. (Currently Amended) The method of Claim 40, wherein the first set of rules causes the ~~radio access network~~ transmitting peer entity to defer sending the polling request for a predefined period of time.

9. (Currently Amended) The method of Claim 40, further comprising adjusting by the ~~radio access network~~ transmitting peer entity, a transmission window parameter in response to receiving the status report.

10. (Currently Amended) The method of Claim 40, further comprising retransmitting by the ~~radio access network~~ transmitting peer entity, at least one Protocol Data Unit (PDU) responsive to receiving said status report.

11. (Currently Amended) The method of Claim 40, further comprising the steps of:

determining by the ~~radio access network~~ transmitting peer entity whether the status report sent by the ~~mobile station~~ receiving peer entity is plausible; and

retransmitting by the ~~radio access network~~ transmitting peer entity, at least one Protocol Data Unit (PDU) in response to determining that the status report is plausible.

12. (Currently Amended) The method of Claim 40, wherein the second set of rules causes the ~~mobile station~~ receiving peer entity to transmit the status report to the ~~radio access network~~ transmitting peer entity if an estimated Protocol Data Unit (PDU) counter is not counting, and causes the ~~mobile station~~ receiving peer entity to not send the status report to the ~~radio access network~~ transmitting peer entity if the estimated PDU counter is counting.

13. (Currently Amended) The method of Claim 40, wherein the second set of rules causes the ~~mobile station~~ receiving peer entity to transmit the status report to the ~~radio access network~~ transmitting peer entity if the ~~mobile station~~ receiving peer entity detects at least one missing or incorrectly received Protocol Data Unit (PDU).

14. (Currently Amended) The method of Claim 40, wherein the second set of rules causes the ~~mobile station~~ receiving peer entity to transmit the status report to the ~~radio access network~~ transmitting peer entity when a predefined number of Protocol Data Units (PDUs) is received.

15. (Currently Amended) The method of Claim 40, wherein the second set of rules causes the ~~mobile station~~ receiving peer entity to transmit the status report to the ~~radio access network~~ transmitting peer entity when a predefined number of Service Data Units (SDUs) is received.

16. (Currently Amended) The method of Claim 40, wherein the second set of rules causes the ~~receiving peer entity mobile station~~ receiving peer entity to transmit the status report to the ~~radio access network~~ transmitting peer entity in response to receiving the polling request.

17. (Currently Amended) The method of Claim 40, wherein the second set of rules causes the ~~mobile station~~ receiving peer entity to transmit the status report to the ~~radio access network~~ transmitting peer entity when the ~~radio access network~~ transmitting peer entity has transmitted during a predefined portion of a transmitting window.

18. (Currently Amended) The method of Claim 40, wherein the second set of rules causes the ~~mobile station~~ receiving peer entity to send the status report to the ~~radio access network~~ transmitting peer entity during a predefined period of time.

19. (Currently Amended) The method of Claim 40, wherein the second set of rules causes the ~~mobile station~~ receiving peer entity to defer sending the status report for a predefined period of time.

20. (Canceled)

21. (Currently Amended) The system of Claim 42, wherein the signaling means in the ~~radio access network~~ transmitting peer entity sends the polling request when a last Protocol Data Unit (PDU) in a transmission buffer is transmitted.

22. (Currently Amended) The system of Claim 42, wherein the signaling means in the ~~radio access network~~ transmitting peer entity sends the polling request when the status report has not been received by the ~~radio access network~~ transmitting peer entity and a polling timer has timed out.

23. (Currently Amended) The system of Claim 42, wherein the signaling means in the ~~radio access network~~ transmitting peer entity sends the polling request when the ~~radio access network~~ transmitting peer entity has transmitted a predefined number of Protocol Data Units (PDUs).

24. (Currently Amended) The system of Claim 42, wherein the signaling means in the ~~radio access network~~ transmitting peer entity sends the polling request when the ~~radio access network~~ transmitting peer entity has transmitted a predefined number of Service Data Units (SDUs).

25. (Currently Amended) The system of Claim 42, wherein the signaling means in the ~~radio access network~~ transmitting peer entity sends the polling request when the ~~radio access network~~ transmitting peer entity has transmitted during a predefined portion of a transmitting window.

26. (Currently Amended) The system of Claim 42, wherein the signaling means in the ~~radio access network~~ transmitting peer entity sends the polling request when the ~~radio access network~~ transmitting peer entity has transmitted during a predefined period of time.

27. (Currently Amended) The system of Claim 42, wherein the signaling means in the ~~radio access network~~ transmitting peer entity defers sending the polling request for a predefined period of time.

28. (Currently Amended) The system of Claim 42, wherein the ~~radio access network~~ transmitting peer entity also includes means for adjusting a transmission window parameter in response to receiving the status report.

29. (Currently Amended) The system of Claim 42, wherein the ~~radio access network~~ transmitting peer entity also includes means for retransmitting at least one Protocol Data Unit (PDU) in response to receiving the status report.

30. (Currently Amended) The system of Claim 42, wherein the ~~radio access network~~ transmitting peer entity also includes:

means for determining whether the status report sent by the ~~mobile station~~ receiving peer entity is plausible; and

means for retransmitting at least one Protocol Data Unit (PDU) in response to determining that the status report is plausible.

31. (Currently Amended) The system of Claim 42, wherein the signaling means in the ~~mobile station~~ receiving peer entity sends the status report to the ~~radio access network~~ transmitting peer entity if an estimated Protocol Data Unit (PDU) counter is not counting, and does not send the status report to the ~~radio access network~~ transmitting peer entity if the estimated PDU counter is counting.

32. (Currently Amended) The system of Claim 42, wherein the signaling means in the ~~mobile station~~ receiving peer entity sends the status report to the ~~radio access network~~ transmitting peer entity if the ~~mobile station~~ receiving peer entity detects at least one missing or incorrectly received Protocol Data Unit (PDU).

33. (Currently Amended) The system of Claim 42, wherein the signaling means in the ~~mobile station~~ receiving peer entity sends the status report to the ~~radio access network~~ transmitting peer entity when a predefined number of Protocol Data Units (PDUs) is received.

34. (Currently Amended) The system of Claim 42, wherein the signaling means in the ~~mobile station~~ receiving peer entity sends the status report to the ~~radio access network~~ transmitting peer entity when a predefined number of Service Data Units (SDUs) is received.

35. (Currently Amended) The system of Claim 42, wherein the signaling means in the ~~mobile station~~ receiving peer entity sends the status report to the ~~radio access network~~ transmitting peer entity when the ~~radio access network~~ transmitting peer entity has transmitted during a predefined portion of a transmitting window.

36. (Currently Amended) The system of Claim 42, wherein the signaling means in the ~~mobile station~~ receiving peer entity sends the status report during a predefined period of time.

37. (Currently Amended) The system of Claim 42, wherein the signaling means in the ~~mobile station~~ receiving peer entity defers sending the status report for a predefined period of time.

38-39. (Canceled)

40. (Currently Amended) In a ~~mobile radio~~ communication system, a method of implementing a flexible ~~radio link~~ link-layer protocol ~~(RLP)~~ that enables transmission of data between a ~~radio access network~~ link-layer transmitting peer entity and a link-layer receiving peer entity, ~~mobile station when operating with a plurality of data transmission modes, wherein each of said data transmission modes has an associated set of rules for transmitting data~~ wherein the transmitting peer entity transmits a plurality of packet data units (PDUs) to the receiving peer entity, said method comprising the steps of:

~~informing the radio access network and the mobile station of a specific data transmission mode to be utilized for delivery of data between the radio access network and the mobile station;~~

determining by the ~~radio access network~~ transmitting peer entity, a first configurable set of rules ~~corresponding to the specific data transmission mode, said first set of rules~~ governing whether the ~~radio access network~~ transmitting peer entity should send polling requests to the ~~mobile station~~ receiving peer entity, and if so, how and/or ~~when~~ how often the polling requests should be sent;

upon determining that the ~~radio access network~~ transmitting peer entity should send polling requests to the ~~mobile station~~ receiving peer entity, sending ~~a polling request~~ polling requests from the ~~radio access network~~ transmitting peer entity to the ~~mobile station~~ receiving peer entity in accordance with the first configurable set of rules;

determining by the ~~mobile station~~ receiving peer entity, a second configurable set of rules ~~corresponding to the specific data transmission mode, said second set of rules~~ governing whether the ~~mobile station~~ receiving peer entity should send status reports to the ~~radio access network~~ transmitting peer entity in response to receiving one or more polling requests, and if so, how and/or ~~when~~ how often the status reports should be sent; and

upon determining that the ~~mobile station~~ receiving peer entity should send status reports to the ~~radio access network~~ transmitting peer entity, sending ~~a status report~~ status reports from the ~~mobile station~~ receiving peer entity to the ~~radio access network~~ transmitting peer entity in accordance with the second configurable set of rules;

wherein the first and second sets of rules are configurable and combinable to change whether the transmitting peer entity should send polling requests, and if so, how and/or how often the transmitting peer entity should send the polling requests, and whether the receiving peer entity should send status reports, and if so, how and/or how often the receiving peer entity should send the status reports.

41. (Canceled)

42. (Currently Amended) In a ~~mobile radio~~ communication network, a system for implementing a flexible ~~radio link~~ link-layer protocol ~~(RLP)~~ that enables transmission of data between a ~~radio access network~~ link-layer transmitting peer entity and a link-layer receiving peer entity, ~~mobile station when operating with a plurality of data transmission modes, wherein each of said data transmission modes has an associated set of rules for transmitting data~~ wherein the transmitting peer entity transmits a plurality of packet data units (PDUs) to the receiving peer entity, said system comprising:

~~means for informing the radio access network and the mobile station of a specific data transmission mode to be utilized for delivery of data between the radio access network and the mobile station;~~

means within the ~~radio access network~~ transmitting peer entity for selecting a first configurable set of rules ~~corresponding to the specific data transmission mode, said first set of rules~~ governing whether the ~~radio access network~~ transmitting peer entity should send polling requests to the ~~mobile station~~ receiving peer entity, and if so, how and/or ~~when~~ how often the polling requests should be sent;

signaling means in the ~~radio access network~~ transmitting peer entity for sending ~~a polling request~~ polling requests from the ~~radio access network~~ transmitting peer entity to the ~~mobile station~~ receiving peer entity in accordance with the first set of rules;

means within the ~~mobile station~~ receiving peer entity for selecting a second configurable set of rules ~~corresponding to the specific data transmission mode, said second set of rules~~ governing whether the ~~mobile station~~ receiving peer entity should send status reports to the ~~radio access network~~ transmitting peer entity in response to

receiving one or more polling requests, and if so, how and/or ~~when~~ how often the status reports should be sent; and

signaling means in the ~~mobile station~~ receiving peer entity for sending a status report from the ~~mobile station~~ receiving peer entity to the ~~radio access network~~ transmitting peer entity in accordance with the second set of rules;

wherein the first and second sets of rules are configurable and combinable to change whether the transmitting peer entity should send polling requests, and if so, how and/or how often the transmitting peer entity should send the polling requests, and whether the receiving peer entity should send status reports, and if so, how and/or how often the receiving peer entity should send the status reports.

43-44. (Canceled)

45. (Currently Amended) A radio access network for implementing a flexible radio link protocol (RLP) that enables transmission of protocol data units (PDUs) between the radio access network and a mobile station ~~when operating with a plurality of data transmission modes, wherein each of said data transmission modes has an associated set of rules for transmitting data~~, said radio access network comprising:

~~means for informing the mobile station of a specific data transmission mode to be utilized for delivery of data between the radio access network and the mobile station;~~

means for selecting a configurable set of rules corresponding to ~~the specific~~ a data transmission mode, said selected configurable set of rules governing whether the radio access network should send polling requests to the mobile station, and if so, how and/or ~~when~~ how often the polling requests should be sent; and

signaling means for sending ~~a polling request~~ polling requests from the radio access network to the mobile station in accordance with the selected set of rules, and for receiving status reports from the mobile station;

wherein the configurable set of rules is configurable to change whether the radio access network should send polling requests to the mobile station, and if so, how and/or how often the radio access network should send the polling requests.

46. (Currently Amended) A mobile station for implementing a flexible radio link protocol (RLP) that enables transmission of protocol data units (PDUs) between the mobile station and a radio access network ~~when operating with a plurality of data transmission modes, wherein each of said data transmission modes has an associated set of rules for transmitting data~~, said mobile station comprising:

~~means for informing the radio access network of a specific data transmission mode to be utilized for delivery of data between the mobile station and the radio access network;~~

means for selecting a configurable set of rules corresponding to ~~the specific~~ a data transmission mode, said selected configurable set of rules governing whether the mobile station should send polling requests to the radio access network, and if so, how and/or ~~when~~ how often the polling requests should be sent; and

signaling means for sending ~~a polling request~~ polling requests from the mobile station to the radio access network in accordance with the selected set of rules, and for receiving status reports from the radio access network;

wherein the configurable set of rules is configurable to change whether the mobile station should send polling requests to the radio access network, and if so, how and/or how often the mobile station should send the polling requests.

47. (New) A mobile station for implementing a flexible radio link protocol (RLP) that enables transmission of protocol data units (PDUs) between the mobile station and a radio access network, said mobile station comprising:

means for selecting a configurable set of rules corresponding to a data transmission mode, said selected configurable set of rules governing whether the mobile station should send status reports to the radio access network, and if so, how and/or how often the status reports should be sent; and

signaling means for sending status reports from the mobile station to the radio access network in accordance with the selected set of rules, and for receiving polling requests from the radio access network;

wherein the configurable set of rules is configurable to change whether the mobile station should send status reports to the radio access network, and if so, how and/or how often the mobile station should send the status reports.